

Systems and methods for transferring data between a host device and a storage medium are provided. In one implementation, a system for transferring data between a host device and a storage medium includes a host interface that receives from the host device a command to transfer data between the host device and the storage medium, a buffer that temporarily stores data that is transferred between the host device and the storage medium, a first register that stores a value for tracking a number of data units that have been transferred into the buffer but that have not yet been transferred out of the buffer, a second register that stores a value for incrementing a value contained in the first register, and a third register that stores a value for decrementing a value contained in the first register.